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PATENT APPLICATION
Mo-6566
LeA 34,399

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF)	
RAINER GRAEFE ET AL)	GROUP NO.: 1713
SERIAL NUMBER: 10/006,497)	EXAMINER: M. L. REDDICK
FILED: DECEMBER 3, 2001)	
TITLE: METHOD OF PRODUCING)	
MIXTURES OF POLYVINYL)	
CHLORIDE AND POLYMERS BASED)	
ON CONJUGATED DIENES AND)	
ACRYLONITRILE)	

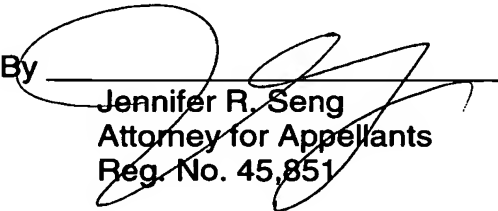
LETTER

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sir:

Enclosed herewith are three copies of an Appeal Brief in the matter of the subject Appeal. Please charge the fee for filing the Brief, \$330.00, to our Deposit Account Number 13-3848.

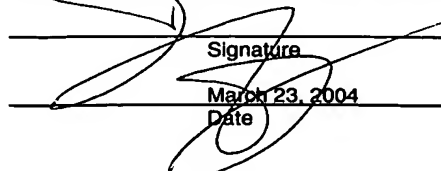
Respectfully submitted

By 
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envelope addressed to: Commissioner for Patents,
Alexandria, VA 22313-1450 03/23/04

Jennifer R. Seng, Reg. No. 45,851
Name of applicant, assignee or Registered Representative


Signature
March 23, 2004
Date



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APPEAL BRIEF

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Sirs:

This Brief, submitted in triplicate, is an Appeal from the Final Office Action dated September 25, 2003, in which Claims 1 and 3-5 were rejected.

I. REAL PARTY IN INTEREST

Each of the inventors has assigned his rights in this application to Bayer AG, a German Corporation. The real party in interest in this Appeal is therefore Bayer AG.

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03/23/04

Date

Jennifer R. Seng, Reg. No. 45,851

Name of applicant, assignee or Registered Representative

Signature

March 23, 2004

Date

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II. RELATED APPEALS AND INTERFERENCES

There are no pending appeals or interferences of which Appellants are aware that would be affected by or have a bearing on the Board's decision in this Appeal.

III. STATUS OF CLAIMS

Claims 1 and 3-5 remain pending and are subject to this Appeal.

IV. STATUS OF THE AMENDMENT

After the Final Office Action, Appellants filed a Response which did not include an Amendment to the Claims.

V. SUMMARY OF THE INVENTION

The present invention relates to a method of producing mixtures of polyvinyl chloride and polymers based on conjugated dienes and acrylonitrile, comprising the steps of mixing powdered polyvinyl chloride with latexes based on conjugated dienes and acrylonitrile, and coagulating the mixture, wherein the powdered polyvinyl chloride is a polyvinyl chloride having a mean particle diameter in the range from 5 to 200 μm and K values (DIN 53726/ISO 1628) of from 40 to 90.

VI. ISSUES

Claims 1 and 3-5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Vanderbilt, et al. in combination with Appellants' own disclosure.

VII. GROUPING OF CLAIMS

None of Claims 1 or 3-5 will be argued separately in response to the Issues. Therefore, Claims 1 and 3-5 stand or fall together.

VIII. ARGUMENTS

Appellants' invention as claimed in Claims 1 and 3-5 is not obvious in view of Vanderbilt, et al. in combination with applicants' own disclosure.

The present invention is directed to a method of producing mixtures of polyvinyl chloride and polymers based on conjugated dienes and acrylonitrile, comprising the steps of mixing **powdered polyvinyl chloride with latexes based on conjugated dienes and acrylonitrile**, and coagulating the mixture, wherein the powdered polyvinyl chloride is a polyvinyl chloride having a mean particle diameter in the range from 5 to 200 μm and K values (DIN 53726/ISO 1628) of from 40 to 90.

Vanderbilt, et al. discloses two methods of mixing NBR and PVC. The first method is known as a "dry-blend" method and involves mixing NBR and powdered PVC. See the Examples. The second method involves mixing the latices of NBR and PVC, i.e. mixing latices of rubber with latices of PVC, otherwise known as the "latex blend method". See column 2, lines 24-26, "the latices of the rubber and the polyvinyl chloride may be mixed...". Each Example disclosed in Vanderbilt, et al. discloses the dry-blend method, i.e. mixing NBR with powdered PVC on a rubber mill.

Vanderbilt, et al. does not teach or suggest mixing powdered PVC as specifically claimed with latexes based on conjugated dienes and acrylonitrile. Appellants further submit there is no motivation to use powdered PVC as disclosed in the dry method in Vanderbilt, et al. with the lattice of NBR disclosed in the second method of Vanderbilt, et al. Appellants further submit, there is no motivation to pick and choose the components as specifically claimed in the process of the present invention based on the disclosure of Vanderbilt, et al.

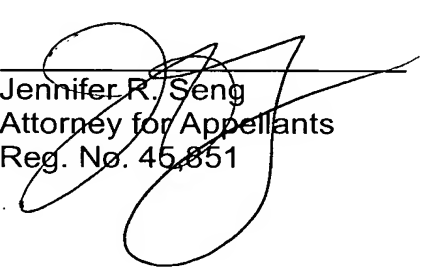
Appellants further submit there is no motivation to use the PVC as claimed in the present invention having the claimed particle diameter and K-values. In the alternative, it is only apparent to one skilled in the art to arrive at the instant invention after reading Appellants' disclosure. Appellants submit that while page 3, lines 21-24 discloses that commercially available PVC's can be used, there is no motivation in the prior art or submitted by the Examiner illustrating that one skilled in the art would have been motivated to combine the claimed PVC with latexes based on conjugated dienes and acrylonitriles. In this connection, Appellants respectfully submit that "in order to establish a *prima facie* case of obviousness, three basic criteria must be

met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference. Second, there must be a reasonable expectation of success. Finally, **the prior art references must teach or suggest all the claims limitations**. The teachings or suggestions to make the claimed combination and the reasonable expectation of success must both be found in the prior art, **and not based on applicants' disclosure**." See MPEP § 2142, citing In re Vaeck, 947 F.2d 488, 20 USPQ 2d. 1438 (Fed. Cir. 1991). The proper standard clearly required by the Federal Circuit is that **"both the suggestion and the expectation of success must be founded in the prior art, not in the applicant's disclosure"**. The fact that the claimed invention is within the capabilities of one of ordinary skill in the art is not sufficient to establish prima facie obviousness

Further, as discussed at page 2, there are disadvantages to the two methods disclosed by Vanderbilt, et al., i.e., not economical. There is no motivation present in Vanderbilt, et al. to provide an inexpensive and environmentally safe method of producing mixtures of PVC and NBR as claimed in the present invention. For at least these reasons, Appellants respectfully request withdrawal of this ground of rejection.

Respectfully submitted,

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APPENDIX - CLAIMS ON APPEAL

1. A method of producing mixtures of polyvinyl chloride and polymers based on conjugated dienes and acrylonitrile, comprising the steps of mixing powdered polyvinyl chloride with latexes based on conjugated dienes and acrylonitrile, and coagulating the mixture, wherein the powdered polyvinyl chloride is a polyvinyl chloride having a mean particle diameter in the range from 5 to 200 μm and K values (DIN 53726/ISO 1628) of from 40 to 90.

3. A method according to Claim 1, wherein the latexes based on conjugated dienes and acrylonitrile are latexes having a polymer, by weight content, in the range from 10 to 50 %.

4. A method according to Claim 1, wherein the polymers based on conjugated dienes and acrylonitrile are polymers in which the content of conjugated dienes is in the range from 40 to 90 wt.% and the content of acrylonitrile is in the range from 10 to 60 wt.%.

5. A method according to Claim 1, wherein powdered polyvinyl chloride is mixed with the latexes at temperatures in the range from 10°C to 100°C.